

Research

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MEASURING CENTRAL TENDENCY and VARIABILITY James Webster

Central Tendency and Variability is basically the collection and description of analyzed data. The summarizing of your data for others For instance , if your were to be opening a clothing business there is much data you would need to collect and analyze before starting a successful business. A suitable location, styles, sizes, colors etc. All of the relevant data is analyzed for popularity and the most popular scores are “ The Measures of Central Tendency”. The Measures of Variability will tell you how these scores are spread.

There are three measures of Central Tendencies, the most used being Mean which looks at the score of all the variables and creates an arithmetic average. Therefore the count of blue shirts sold against other colors would be annualized and average taken with the same equation for all other variables.. Median divides the sets of data in half and places half above the median and half below the median while mode pertains to the score that occurs more frequently in a set of data. In each case an entire set of data can be summarized with a single value.

There are also three main formulas for the measure of variability and they are Range, Variance and Standard Deviation. Through these measures we can tell how much the data in each set varies. Range measures the distance between the highest and lowest values and gives us an idea of the width of our data set. This is popular although it does not show were the data is grouped in the set. The total amount of variability is taken into account with Variance. To assess the difference in data sets a point needs to be found to which each observation can be compared. As mean takes in every

observation in its calculation it would be the best point of comparison.

Standard Deviation calculates the square root of a variance. It gives a good measure of variance and shows the average distance each observation is from the mean.

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